T Y 343 no door, the doorway being merely an opening between the rafters [there probably was a doorway frame of some sort]. The fire was in front of the center post. Firewood was kept in two T Y [394] piles, one on each side of the entrance; men sitting next to these put wood on the fire.

T Y 515 Men did not indulge in sweats until they were twenty-five to thirty years old. Evening [late afternoon?] was the most popular time for a sweat, after which they would swim and return home to sleep. While in the sweat house men usually "just lay around." Sometimes, merely to entertain others or to practice, a man would T Y 517 dance the ha´t·m (the "piston-rod step" of Powers) if someone would sing for him. For such a performance there was no costume; it had no ritual significance. No games were played in the sweat house, nor was smoking indulged in -- "it was too strong in there."

MISCELLANEOUS DATA

T Y 524 Games.---Women played huču´w·s, the walnut-shell dice game, in the daytime only.

T Y 323 Pottery.---Pottery was made at Sototlo by women. The pounding of the clay paste, the coiling process were the only details remembered.

T Y 436 Money.---The small disc money of clamshells was measured by doubling a strand and then slipping it into a series of chain-stitch loops. A "rope" long enough to reach from the wrist to the shoulder, was worth $2.00 in "American money." Such a strand was exchanged for an eagle's leg with the down still intact.

T Y 286 Blankets.---F.M. did not know how "woven" skin blankets were made, save that strips of rabbitskin or wildcatskin were used in them.

T Y 805 Calendar.---A calendrical system of months based on moons was used in the old days. The only name he remembers was that for the month roughly coincident with February: kala´sa, meaning "blows it all away" or "cleaned up," because it was a period of high winds, trees were bare, and the leaves all blown away.

T Y 301 Hair nets.---These were used "everywhere" for the basis of feather head ornaments. A single hairpin (tsama´ni) held the ornament in place. Neither the net nor hairpin was used for ordinary dress, nor by women.

T Y [237] Yellowhammer strips.---Ornamental bands of sewn yellowhammer feathers (paiya´mən) were known but rarely used.[130] A doctor who owned one would wear it for the dancing on the night of celebration following a mourning ceremony. It was never used when the doctor was dressed for curing; it was "just to look pretty." The band was worn around the head with the ends hanging down the back.

T Y 534 Musical instruments.---The flute (uṭoi´´i) was made of elderwood; number of holes not

[130] Cf. Koso specimen (ibid., pl. 58).

802
11. ti'uv y‹t 100. y‹t p‹č
12. ṭi'uv poñoi etc. 1000. ṭi'uv p‹č
21. poñoi ṭi'uv y‹t
22. poñoi ṭi'uv poñoi
etc.

TIMES, NATURE, DIRECTIONS, SEASONS

805
321
192
Informants differ somewhat in their designation of the day's phases and in the pronunciation of words; such differences are indicated by the individual's initials.

Times of day.---

sala´lwidao: morning (M.L.); hiam [now] šala´dwidao: early morning (M.P.)
te´yao ču´ka: before noon (M.P.)
ču´kao: noon, noon meal (M.L.); hiam ču´ka: noon, noon meal (M.P.)
wakhu´šu ču´ka: afternoon (M.P.)
ne´wao: sundown (M.L.); ni·a´wi·ao: sundown, early evening (M.P.)
hiam ni·u´ši: evening (M.P.)
toi´yuma: night, dark (M.L.); hiam ta'‹´nši: night dark (M.P.)

Designation of days.---

o´piu: day, light (M.L.); u´piu: day, light (M.P.)
he´če u´piu: today (M.P.)
šala´dwidao: tomorrow [lit., morning] (M.P.)
ati´opo´do: short day as in winter (J.B.)
wa opo´do: long day as in summer (J.B.)

The days of the week have received native names which are based on the numbers 1 to 7, as follows (J.B.):

wuda´o: Monday
pu´ne'uñ‹č: Tuesday
supe'a´ta: Wednesday
hai´'obata: Thursday
y‹ča´o: Friday
ča´od‹tpi: Saturday
no´mč‹n: Sunday

Phases of sun and moon.---

o´piu: sun. The sun goes into the lake [Tulare; ocean?] every night and comes up on the other side every morning (M.P.).
opo´da: sun (M.L., J.B.)
woi´yo opo´do: solstice (lit., turning-back sun). The solstice was noted, and recognized as the turning point for the length of days, but otherwise was without significance (J.B.).
u´p‹s: moon (M.L.); u´p‹š (J.B.)
hača´m u´p‹š: new moon [lit., young moon] (J.B.). If the new moon in winter showed the faint circle of its complete sphere, it was said to be "making its house," and was regarded as a sign of rain.[209]

[209]Cf. Hopi (Beaglehole, Notes on Hopi Economic Life, 35).

805 hiam map:´nši u´p:š: full moon (J.B.)
821 hiam katai´šu u´p:š: old moon (J.B.)
u´p:s tawi´či: waning moon [lit., dying moon] (M.L.); hiam tawi´t:l: now dying, said of waning moon (M.P.)
192 kamu´tu u´p:š: dark of moon [lit., lacking moon] (J.B.)

That the moon served as a month or time marker was disclaimed by J.B., which is not credible. In this connection he said there was "an old lady who told what kind of weather was coming; she was just like an almanac." He had no notion of how she acquired this ability.

An eclipse was called by the entire phrase: u´p:s [or opo´do] kai´'iyu doi'ye´di (moon [or sun] Coyote eats). During an eclipse of either planet, people rushed out and shouted: am pi' he' u´š:t nanu´nwa (not eat leave-some please) (M.L.). The same idea was rendered in English by M.P.: "Leave me some sweet stuff!" The grandmother of M.L. had told her that it was so dark for two or three days once that people had to carry torches in order to secure their wood, food, and water.[210]

821 Stars, constellations.---

192 toi´t:s: any star (M.L.); čo´tač: any star (J.B.)

tawa´n:t: morning star (M.L.); tawa´n:l: morning star (J.B.). All men of character were up in time to greet the morning star. The Yaudanchi, Tm.W., said that on his way for his morning swim he would say to the star: "My elder brother comes now" (nip:´čn:m hi´am ti´ši). Other men or women made prayerful remarks of the same sort. Some asked help of the sun and moon. To the sun Tm.W. would say: "I talk to you Sun, help me" (na man haiyo´d apo´d, a m:d n:m).

ni´ye'ao: evening star (J.B.)

goi´yuma: Pleiades (lit., young women) (M.L., J.B., M.P.). These always appeared in the fall when it was cool; they marked the beginning of winter (M.L.). There is a popular myth, localized by each tribe, that these girls left their husbands and flew to the sky.[211]

hoda´otš:d: Milky Way [lit., to race] (J.B.). Falcon and a fast flying duck (ho´dodo) raced there; Falcon won.[212]

Nature.---

823 met i´d:k: a large stream, such as Kaweah River
192 po´čuč id:k: a small stream, such as Lime Kiln Creek
pa´'asi: any pool or lake, such as Woodlake

[210] This might be a factual statement or hearsay derived from myths of Coyote's race with the Sun and the subsequent darkness (Gayton and Newman, 83, abstract 96, note 3).

[211] Ibid., 26, 65, abstracts 44-52.

[212] Ibid., 67, abstract 54.

[P. 89b]

823 po ˊkːd: a spring of water
hotạ ˊo: rain (M.L.); hotoˊˀo: rain
192 (Tm.W., Yaudanchi)
hosyu ˊmai: a big rain after a thunder storm (Tm.W., Yaudanchi)
taka ˊˀa: thunder (Tm.W., Yaudanchi)
ḳomu ˊda: thunder, another name, but not a different kind (Tm.W., Yaudanchi)
howo ˊṭa: hail (Tm.W., Yaudanchi)
tida ˊša: wind (M.L.)
wi ˊti tida ˊša: a slight wind, breeze (M.L.)
wu ˊhna tida ˊša: a hard wind (M.L.)
čedu ˊditu: a cessation of wind, "a wind died down" (M.L.)
wo ˊo ˊkyed pa ˊˀan: earthquake [lit., trembles or shakes ground]. J.B. said "the old folks were afraid of earthquakes," but he did not know what caused them. Nothing was done when they occurred, nor does he recall any damage done by them. He is of the opinion that earthquakes are a recent manifestation, "there weren't so many in the old days." One very severe one he recalls from his youth, possibly
[772] that of 1872. He never heard of successive world creations and destructions. ~~In this~~ S.G. concurred, saying that "this is the first and only world," and that Eagle made it.

192 Directions.---These are listed in the order
823 voluntarily given.

da ˊtu: west, plainsward
ho ˊmot: south
huši ˊm: south
do ˊmtoi: east, mountainwards
ti ˊpːn: up
a ˊdːd: down

The mountains to the east (the Sierra Nevada) were called du ˊmːts; to go up into the mountains, domta ˊo; nuta ˊwi was also given as mountainwards by M.L.; to go toward the plains, da ˊṭu. People to the north were called hošo ˊma; to the east, nutu ˊwːč; to the west, tokːlyu ˊwːč; to the south, humtː ˊnːn.

do ˊmtu i ˊdːkao: upstream
da ˊṭu i ˊdːkao: downstream

805 Seasons.---Some informants followed the
192 general Yokuts pattern of three seasons. The
821 choice of three might be due to the influence of "ritual numbers" (3, 6, 12 for Yokuts), but seems attributable to the natural phases of the climate, a brief mild sunny season, spring; a long, hot sunny season, summer; a brief cold rainy season, winter. The introduction of a fourth season ("autumn") seems due to European influence, yet may merely be a further refinement like the "late spring" given by J.B.

tiša ˊmiu: spring (M.L., M.P., J.B.); February to April (J.B.). When the flowers were in bloom; women began repairing their

805 seed-gathering baskets [for summer use]; three kinds of clover and wild onions were eaten.
821 ko´toi tiša´miu: late spring (J.B.); May (J.B.)
192 haiya´di: summer (M.L., M.P., J.B.); June to October or November (J.B.). The very long season of "dried up" grass; people moved to seed-gathering camps. Toward the end of this season the mourning ceremonies were held after people were back in their villages (M.L.).
wu´so: autumn (M.P.); wu´sao: autumn (J.B.)
tomo´kšiu: winter (M.L., M.P., J.B.) (M.P. also gave ñe´ao, perhaps from Spanish nevar, to snow); December to January (J.B.). The acorns were just down; there were fogs, and later rain and frost. The mountains got white; about November to March (M.L.).

PLEASURES

Games

526 Shinny.--There were two forms of shinny (kotdi´wiš), one played with a ball (o´dod) and one with a hoop (wuku´wič). Both were essentially a race to see which of two opposing sides could propel its ball or hoop over the course, strike the turning post (kite´´u), and reach the goal hole (ko´wiš) first. The shinny stick (ku´tit), slightly curved at one end, was preferably made of mountain ash (ča´poi). The length of the playing field (kota´dwiču) depended somewhat on the number of players normally available. Since the ball or hoop was struck from partner to partner, the more players there were, the longer the course needed. A hole at the starting point was the goal for the finish, the course being marked at its opposite end by a post which the player must strike with his ball before turning about. He holed his ball at the finish.

If two men were trying to prove their individual prowess, the course would be shortened. In contests of this sort onlookers usually demanded six wins in succession. Otherwise six holes to either side in any order
[525] normally won the game. An onlooker was selected to hold whatever bets were made; he urged on each side impartially, calling on first one, then the other to win. Bettors, however, yelled encouragement to their favorites. There were no songs. There were no recognized rules which informants could give me, yet doubtless there was tacit agreement upon many points. An especially well played game which won admiration from spectators was called "pretty" (poiyo´mi).

Two to five partners played on each side. If the first man striking the ball did not succeed in making it reach his partner, he took another stroke, or as many strokes as necessary: the only penalty was the loss of time involved for him to run after the ball and strike again. Sometimes a "cranky" partner

825 just the same in any kind of tribe, just a different tribe, that's all." They knew nothing of totems being related or grouped as [615 moieties or phratries. J.P. said he had heard 616] of it, but neither the Wukchumni nor their neighbors did that.

PERSONAL AND FAMILY LIFE

Pregnancy, Birth, Infancy

843 A pregnant woman continued her work as usual until the quickening; even then she did not cease ambulatory work entirely but would do easy tasks such as gathering clover. It is said that not infrequently women away from home on such tasks would deliver unaided. M.L. remembered such an instance at Gutsnumi, when a woman returned to the village with twins: she had cut the navel cords with her long fingernail. Tabus on food were the usual ones on meat and salt and were observed from the first moon after menstruation failed. Even yellowjackets' larvae could not be eaten since yellowjackets are voracious meat-eaters. Neither could anything hard be eaten, such as dried cakes of meal, since this made the birth difficult. The result was that diet during pregnancy consisted almost exclusively of gruels and greens. A pregnant woman must not scratch her body lest it become ugly and wrinkled, nor her head as her hair would split and fall out.

The woman's husband observed the tabu on meat, did not fell trees by firing, did not hunt deer, did not gamble, and, in recent years, did not chop wood. The man's tabus were observed during pregnancy and until the newborn [846] infant's navel stump dropped off. There was no ceremonial observance of his renewal of a normal existence. The mother's tabus continued for about three months after delivery, when the resumption of meat, etc., was ritually observed.

● 805 "Women went by the moon and men by the 843 sun," said M.L., referring to menstruation and morning erection. By observing the phases of the moon a woman could judge fairly well when to expect her next period. When a period failed, she believed herself pregnant if it did not eventuate by the next occurrence of the moon-phase, and she began observation of the 843 food tabus. If the child was the woman's first, 854 her mother or grandmother made the first cradle for her. The child's second cradle, made also by mother or grandmother, was not started until the infant was delivered; to start it sooner would "make the baby come too soon." But this [177] is no longer the practice since the Mono-type cradles of fine willow, requiring more time for manufacture, have come in vogue; the former Y-frame cradle could be made in a few days. Also provided by the girl's mother were the necessary soft skins, shredded bark, and several sleeping mats for the infant. These things the woman kept in her storehouse.

[P. 1039] Wukchumni

846 The father ate only "soft" food until the navel stump came off; the mother continued her abstinence from meat for three months. She might eat "greens" and any vegetable foods so long as they had no strong flavor or odor; because of its strong taste, fish was not allowed. (M.P.'s grandmother particularly restrained her from eating fish while nursing, as "it went to her breast.") If the mother should eat yellowjacket larvae (tabu because yellowjackets eat meat) the baby would get a sore mouth. The [757] cure for this was to wash the infant's mouth with a mixture of pulverized ša'apuš (unidentified plant) and dried, pulverized yellowjackets.

553 During the first week the baby was called yət no´mč·n, literally "one-seven," i.e., one week, and during the second po´ñoi nomč·n, "two-seven" or two weeks.[238] It was then given a name by its paternal grandfather: if a boy, the grandfather's name [or great grandfather's], if a girl the grandmother's.[239] Names belonged in families; persons who were not kin could not [551] have the same name (M.L.).[240] Wukchumni names were meaningless, said all informants. "If a name meant something it must be a nickname" (M. and J.P.). The grandmother [maternal?] gave the infant its permanent cradle, upon which it slept for one to two years.

846 Three months after delivery the mother was given a ritual cleansing and celebration (wi´ti lonu´wis) by her husband's mother. The mother-in-law brought "new clothes" (a deerskin apron if she could afford it), beads, and a "washing" basket and deer meat. She washed the mother's face and hair, combed her hair and put red paint on her face, and hung beads (koikoi) around her neck. Both paternal and maternal aunts were there, having brought large quantities of food with them. Village friends called, both men and women, with gifts for the mother -- beads, a basket, or some trinket -- and were given a present of food in return. The food was "usually eaten right there, though they could take it home if they wanted to." This "reception" continued for two or three days. Thereafter the mother resumed her normal existence, slept with her husband, and ate almost any foods save the "strong" ones.[241]

[805 177]

[238] Probably "one-six" before the introduction of the seven-day week which "came with the Catholics." It is even possible that this designation of age by weeks is of European origin, although the "week," a native concept, is not.

[239] This is an over-simplification, as genealogical evidence shows. The tendency was to carry names through alternate generations, but those so bestowed are few compared to those seemingly chosen at random from the family's stock.

[240] This statement is entirely borne out by genealogical data.

[241] M.P. made a confused statement, which we never got disentangled, to the effect that after the mother's "party" she went home with her mother-in-law who "took care of the baby for her and the mother brought it food sometimes." Perhaps this was in case of birth during the initial period of matrilocal residence?

881 meat tabu was observed. Girls who drank cold water and ate meat got overly fat.[243] Like M.L., M.P. said "girls followed the moon, and boys
841 the sun," but added that "girls were always
805 sick on the full moon," which is, of course, impossible. Girls gauged the expected arrival of their periods by the condition of the moon from month to month, as explained by M.L. In the old days, said M.L., a menstruant cooked for the family as usual, but she slept on the opposite side of the house from her husband and intercourse was strictly tabu.

881 During adolescence both boys and girls were sent to swim at night. The informant J.B. gave this practice a name, pa·duwiš, and defined it more rigorously than others. For thirty nights during the coldest, frostiest weather (December-January), a lad or young girl was sent out three times each night, once just after he had fallen asleep, again halfway through the night, and again near dawn just before the other members of the household would be arising for their own swim. The youngster who slept soundly was given a vigorous poking until he got up and went out. The swimmer ran back wet to prove he had immersed himself; he dried and warmed himself by the low fire and jumped back into his bed. The purpose of these efforts was to produce a physical and mental hardiness. After adolescence a person of character continued the practice, though not quite so rigidly, i.e., one dip a night was sufficient. It took some fortitude on the part of the parent who himself must waken to see that his sons or daughters were roused each night three times: J.B. said, "old men some-
[751] times lost their children because they wouldn't see that they did this right each night." People often did the same thing in the summer-
[515] time and those who did "never got sick." Such bathing was of an extra and special sort: it was taken as a matter of course that one swam at daybreak every day merely as a matter of decent behavior and personal cleanliness.

861 J.B. added that every man talked to his own children, especially his sons, telling them how to behave, to be industrious, and to be respectful toward supernatural manifestations. Both boys and girls learned their duties and techniques of work from their father and mother by association, emulation, and specific instruction.

Marriage.

582 The only regulation of marriage was a restriction based on blood relationship. All Wukchumni informants claimed that a relationship as distant as third-cousinship was a tabu to matrimony. A marriage with such a relative

[164] [243] M.P. attributed the obesity of a certain old woman, who was obviously tumorous, to infringement of the meat tabu.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokum NS29
EP. 156 a] Dumna

●805 Calendar.--Each moon "had a name just like the months," but B.W. would not attempt to recall them.

Nature, stars, directions.--B.W. was interested in categories and liked to volunteer this information.[40]

192 821 He gave the following terms: soko´wa (wind); me´mi'ač (thunder, ta´lak, Gashowu); wa´lma (lightning). Op (sun); hapi´l (heat of the sun); hai´li (day). Hača´mi'op (new moon, lit. young); pime´mat (full moon); toyonu´mni (dark of the moon, waning moon?). Se´yal (rain); čom (cloudy condition; fog?); ye´le'a´yəla (big rain from the west). Wa´la (sky or firmament); če'a´tas (stars); tawa´nəs (morning star); čomo´loalo´hi (evening star); yeše´yəš (Pleiades); kačpe´la (a constellation, "husbands of the Pleiades"); hata´nhun (eclipse of sun or moon). Ho´lki (the ground or earth); ši´ləl (rocks, embedded rocks); i´lək (water).

192 823 Directions were particularized as follows: ho´šim (north); homo´ti (south); ta´nən homoti (to go south); to´xəl (west; toward the plains); toxəl tu´nulao (westward downhill); notu´ (east; toward the mountains); notu tunulao (eastward up hill); toxəl pa'a´su (the plains); tunulao (hill, hillwards); a´təl (directly down, also downhill); tanən atəl (to go down); atəl tunulao (down hillwards); ţi´pən (up, directly above). Wakai´yao (downstream); ţipən wakaiyao (upstream); hami´ni (near side of any stream); hada´miu (far side of any stream). Ho´ho (ocean, which B.W. had never seen). In connection with directions he added the following: hihi´mət (to run); witi´nət (to fall down); haswə´nət (to fall down dead or to be dead).

192 561 Life span.--The life span B.W. divided as follows: pai (baby); hača´mi (pre-pubertal boy or girl); muke´la (mature woman); no´no (mature man); moha´lo (aged man or woman, like himself, said B.W.). He added: hoi'i´ləl (to be well after being ill, convalescent, again "like himself"); haswə´nət (dead person).

764 Burial.--When a man died, all his relatives, even his distant cousins, came and cried for one or two days. They would not keep the body longer than that. If it were buried, the grave was 3 to 4 feet deep. In the old days all bodies were cremated on a pile of brush and heavy wood; the pile was about 4 feet high. During the burning the relatives and others sat in a circle around the fire and wept. About one day later, when all was cool, the bones and ashes were gathered in a basket, and the receptacle and its contents were buried. B.W. could not say who officiated on these occasions. The Chowchilla tribe also cremated.[41]

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[40]Later, when in recovered health, he became Dr. Stanley Newman's informant for linguistic material, an experience I feel sure the old man enjoyed to the utmost.

[41]Bunnell, 122.

[P. 158 a] DUMNA

756
789 ko´no·no·

si li ka´na·ha·
[repeated twice]

This B.W. could not or would not translate. The first and second words are probably "song renderings" of rain (se'el) and water (i´l:k) and supernatural power (t:pni).

[821] When there was a big rain and one wanted to stop it, one would strike a dog. The cries of this animal would be heard by a celestial dog who caused thunder and controlled [?] the weather.

BELIEFS

715 B.W. said that his father told him the dead got up in three days and went above, where God is. B.W.'s dead brothers and sister were already there.

776 177 He conceived God as God (not t:pni or Eagle), but Jesus Christ as the ya´y:l hawk and son of Eagle.

773 821 Thunder is the result of noisy behavior by Roadrunner, Blackbird, Raven, and Dog, who are above in the sky. The big dog, whose name is Ya´ol:č, makes the most noise. "He can hit anything and smash it down. He is mean. He makes all the big rains." When he hears the cries of a dog on earth, who is being beaten because of the rain, he makes the rain cease. B.W. had never heard of thunder being twins or associated with tule.[42]

An eclipse of the sun or moon is caused by an eagle spreading its wings over it. B.W. could remember no attempt being made to change this condition. (See Kechayi information.)

● 805 Three seasons, which are the natural moods of the climate, were distinguished: tiša´miu, spring, about February to April; hai'a´lu, summer, May to October; tomo´ksiu, winter, November through January.

CEREMONIALS AND RITUALS

796 276 Jimsonweed ritual.---Jimsonweed (ta´nai) was taken in the spring; "in the summer it was poison." Two Choinimni took it in the summer-time and died. It was drunk by both sexes. This informant said he took it each spring with his father and uncle; yet, as in other matters, he was unable to bring his mind to bear on details. He claimed "people quit eating meat for one year before taking tanai."[43] During that year the person went out each night regardless of the weather and talked prayerfully

[42] Wobonuch and Chunut beliefs, respectively.

[43] Perhaps this was only for the first taking. If it was taken each year, as B.W. claims he did, the drinker would have to become "vegetarian."

[P. 162a] Kechayi

821 192 773 Star lore.---Terms used for stars, phases of sun and moon, etc., follow:

u ´pːš: sun
toiyu ´nəm u ´pːš: moon (lit , night sun)
tawa ´nːš: morning star
tomo ´lo ´o ´lohi: evening star
čaya ´taš: star (general)
muxe ´ma: Pleiades (lit., young girls). E.M. disclaimed all knowledge of the tale of the girls' flight from their husbands.[52] When this constellation was on the eastern horizon at dawn, the river was deep, but when it was on the western horizon at dusk, it was time to go to the river for the spring salmon run.[53]
soiyo ´lui yawač ːt: Milky Way (lit., antelope-place running). Antelope and deer ran a race across the sky from northeast to southwest. Deer won.
wate ´lau: a shooting star. Doctors knew something about these, but "plain people wouldn't know."
wə ´čːn čano ´ ´onːt: eclipse of sun or moon (lit., Condor eating). The Condor was thought to be eating the luminary; he hid it with his wings. At this time everyone went out and shouted. This shouting was led by the Nutuwich people: "the Nutuwich could holler best, the Tokelyuwich couldn't holler very good." Coyote was not involved in eclipses. When an eclipse of the sun occurred, a horse was killed, in addition to the shouting. The meat was eaten, the carcass being left to attract Condor away from the sun.

● 805 Calendar.---The year was divided into moon months (yət u ´pːš, a month, lit., one moon). These had special names which E.M. forgets. It contained five weeks, that is, four weeks of six days each, and the dark of the moon (gatai ´ši) counted as six days. The week (šu ´man, Sp. semana?) is now said to have seven days (nu ´mčːn, seven); the old week was called ču ´lupai (čo ´lːpi, six).

823 Earthquake.---E.M. had never heard of an earthquake in this region. (This is curious since she had such a clear memory of the Ghost Dance in 1872, the year of a violent earthquake in the San Joaquin Valley.

805 301 Snake-charm.---In the spring men and women wore abalone-shell gorgets, the glittering of which was thought to make rattlesnakes give a warning rattle (snake-charm, čune ´ki).

302 387 822 192 Paint.---The colors and sources were as follows:

ho ´suč: white. A clay which "the doctors got some place." They would give it to anybody

[831]

[52] One suspects reticence: the story is regarded as somewhat obscene, at least to tell to a stranger.

[53] This is approximately the same time; May 1 the Pleiades are on the eastern horizon at 6 a.m., western horizon at 6 p.m. Allowing for actual circumstances (the wall of the Sierra Nevada, what constitutes "dusk," etc.) there may have been a two-week interlude between the "time of high water" and the "time for spring salmon."

they had the custom of passing the pipe around a group so each person might take a few puffs. He thought "they had their own tobacco," whereas S.O. said they got it by trade from the Western Mono and Yokuts. Both are probably correct: the San Joaquin Valley tobacco no doubt was desired as superior.

TIMES, NATURE, DIRECTIONS, SEASONS, BELIEFS

The following times of day were designated for conversational and practical purposes by the Michahai:

upiu´: daytime
o´puš ti´ši: sunrise [sun comes]
či´nao: noon [now means "dinner"]
siw‹´lši: midafternoon [lit., "downing" or "lessening" referring to the sun]
niawa´lči: sundown ["about gone," not literally]
toi'a´nši: night, dark
ču´pao toi'an: midnight [lit., center, halfway between two points]
toi´niu: post-midnight
tawa´niu ti´ši: dawn [lit., morning star comes]

The morning star, sun, moon, and water were all addressed with a prayerful statement which was standardized, the essence of which was, "I am doing thus now, may I continue to do thus."

A well-reared man or woman always rose before sunrise and walked out to speak to the morning star (tawa´n‹č) saying, "I'll see you when you come out as long as I live." The new moon (hača´ main u´puš) was addressed likewise, "I see you at this moment. I'll see you all the time as long as I live." The full moon was called hi´am wate´'‹ša upuš main (now enlarged moon our).

The sun S.O. called upuš main, the same term as for moon, adding that the Wukchumni said opo´lo main. "The sun goes up and comes down always" (referring to its immutability). Shamans of prestige got power from it which they used when making airshot. The sun was addressed at any time, as by a man off hunting, who would say, ‹niša´n nan wan upuš n‹m (good [luck] me give sun my). When the sun sets, it travels back under the earth at night, to the east. The morning star "always comes ahead of the sun to show people that the day is coming." The morning star "switches its place at certain times of the year and becomes the evening star but it is always called by the same name -- tawan‹č or site´lši tawan‹č." When the morning star comes the night rises "right up to heaven."

The Pleiades are called goi´yuma (young women) as elsewhere with the Yokuts, and the same story of their homosexuality and abandonment of their husbands is known to the Michahai and Waksachi.

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An eclipse of the moon or sun is attributed to Coyote's eating of the sun and is called by the descriptive phrase, kai ʻyu aʻnahaš opăuʻ main (Coyote eat sun-our). During an eclipse people ran out and shouted loudly, some actually said, kaiyu om aʻnaš (Coyote [do] not eat), or kaiyu om apiˑʻ (Coyote [do] not finish, i.e., leave some). Others said, loʻluš tunaʻnuna (leave it alone; not literal). "When they hollered this way, Coyote would let go." The Waksachi terms for eclipse of sun and moon respectively were: taraueʻ nawaʻrit and taʻowˮ nawaʻrit.

W Y 805 221 The following four seasons were distinguished: puaʻkːn, fall, acorn-dropping time [October, November]; tomoʻkăiu, winter, cold approaching [December to February]; tiăaʻmiu, spring, green coming [March, April]; haiaʻlu, summer, grass drying up [May to September]. The months of May and June were spent in seed-gathering. In July and August the people went higher up into the mountains to get piñon nuts. When they returned to the permanent village site, the mourning ceremonies were held in September-October. Following this, the acorn crop was harvested, and the Bear Dance held about November. In February-March tañai-drinking took place, and in April the Snake Ritual was seen in the neighboring Yokuts villages.

W Y 805 821 192 552 B.O. gave the following information in Waksachi terms, which parallel those given by S.O. for the Michahai.

Times, stars, nature:
- tapewaʻno: daytime
- haʻnos: before sunrise
- motveʻsihop: sunrise
- tukitaʻwena: noon
- motaraʻtahikup: sunset
- ureʻʻuñus: after sundown
- totsoiʻʻidi: dark or fully night
- taraʻue: sun
- taʻowˮ: moon
- nasuʻmi teʻgiʻup: stars, general; lit., "all stars"
- tapuʻha: morning star
- soʻŏsoʻŏ: Pleiades
- teʻgiʻup waʻtseit: shooting star; lit., "star falling"
- naʻwarit: added to sun or moon indicated eclipse
- tuoʻpade: sky
- toˑʻuare: clouds
- uˑʻuare: rain
- pahoʻnop: hail
- nuʻbabi: snow
- piˑʻbːp: earth, dirt
- pasiʻwap: sand
- patiguiʻnoba: mud
- tːp: granite
- paheʻ: soapstone

Y W 823 192 Directions:
- piteʻkimat: south
- quiwiʻ: north [given as west by other Western Mono]

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
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peda´wi: west by south
paña´ri: east by north
huñwa´r*: wind, might be added after any of the four above to indicate winds from those directions

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● Seasons:
ta·´wano: spring (approximately February to April); clover, greens, jimsonweed
tasa´wano: summer (May to September); rattlesnakes out; "all kinds" of seeds ripe
iu´bano: fall (October and November); acorns, pine nuts; deer hunting
to·´wano: winter (December and January); men made string; women made pottery and baskets

Y
[184]

B.O. insisted that four seasons were aboriginal divisions, as did S.O. Perhaps the interpolation of a "fall" season, omitted by valley Yokuts, is climatically correct for the mountain-dwelling peoples.

Beliefs and Miscellaneous Data

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The footprints of the Pleiades girls are in a rock pile called opo´do (Sun place) near Aukland. There is one little rock which, if stepped on, will cause a rattlesnake to come out and bite the offender.

Eclipses are attributed to Coyote's eating of the moon or sun.

W
Y
825

Rattlesnakes were admonished not to bite. Some snake doctors, one of them was Pušl·l·n, told S.O. to say this every time he went out in March or April: "You get out of my way. As long as I live, all the year round, you keep out of my way." Said S.O., "The rattlesnakes heard this and would not come near you or bite you."

A tarantula's bite was not seriously poisonous, so B.O. was told by people of his grandparents' generation. They were not afraid to allow them to crawl on them and bite them, and "to show off" a shaman would hold one on his tongue and be bitten. The black spider (mu´ča, the Black Widow) was poisonous, and only a "big doctor," to show what power he had, would permit one to bite his tongue.

B.O. once swallowed a fly; this made him very sick. An acquaintance of his, however, would swallow them alive "just to show that it didn't make him sick."

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The Hewatsi were prehistoric malicious people who "killed on the spot." They were the original owners of the sun, from whom it was stolen.[165]

SOCIAL ORGANIZATION

Officials

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The chief's (tia'a, Michahai; po´ginape, Waksachi) office was inherited in the male line

[165] Cf. Gayton and Newman, 38, 32.

2: Kroeber E-5 (ca. 1918) 1953
NS29 Yokuts NS29

scalp celebration or victory dance. It can accordingly be concluded that scalping customs were of relatively little moment in Yokuts life.

MONEY.

Ordinary money consisted of strings of shell disks, of the wampum type, *keha*. During the past hundred years the Yokuts derived at least part of their supply of this currency through visits to the ocean. It is uncertain whether such trips were made in purely aboriginal times. The unit of measurement in the north was the *chok*, one and a half times the circumference of the hand. In the south the *chok* was somewhat shorter, and was reckoned as half the *hista*, two times the circumference of the hand.

Long perforated cylinders, perhaps made from the columellæ of univalves or from clams of unusual size, were called *humna* or *humana*, and were exceedingly valuable. They came from the south, probably from the Chumash.

GREETINGS.

There was little or no handshaking before the white man introduced the custom. Kissing was another undeveloped greeting. Mothers kissed their children, and lovers each other in seclusion; but no one else. The usual greeting is *hileu ma tanin*, "where are you going?" An old form, now less used, is, in foothill dialect, *ma-wit hide*, "you, hello"; more literally, "you, where?"

Like some other Californians, the Yokuts call the years "worlds." *P'a'an tanshi*, "world went," denotes the lapse of a year.

BIRTH.

A woman about to give birth sat on the ground grasping a stake set up before her. At the moment of parturition she was raised by an assistant who grasped her from behind. The umbilical cord was tied with one of the mother's hairs, and severed with a knife of cane or elder wood, according to locality. The Chukchansi buried the cord; the Tachi preserved it by having the child wear it over its abdomen.

Husband and wife were under equal restrictions after the birth of a child. They ate no meat or hard food, and did not cook, hunt, work, or touch tools. The Yokuts attached the greatest importance to these observances, some of which were continued until the remnant of the cord dropped from the child's navel, and others for several months.

The monthly condition of women—which was thought to be connected with the dark period of the moon—was viewed with less scrupulous abhorrence by the Yokuts than among many tribes.

4: Gayton E-5 (1925-1930)1946
NS29 Yokuts NS29

ship of environment to culture, and while matters such as instinct, mental level, and schools of anthropology in vogue at the time somewhat obscure the main issue of his treatise, his "reaction point of view" may still be examined profitably.

> By reaction we mean the conception that external things and relations impress the mind so as to be at least the occasion for return action. . . . The problem for us is, however, Do such stimuli or impressions determine or modify culture?[6]

Nor did Dr Boas omit the environmental factor when he said,

> The explanation of the activity of the mind of man . . . requires the discussion of two distinct problems. The first bears upon the question of unity or diversity of organization of the mind, while the second bears upon the diversity produced by the variety of contents of the mind as formed in the various social and *geographical* environments.[7]

Without emphasizing the subsistence link which already has been the chief concern of culture-environment studies, the paper in hand will demonstrate how large a part of one culture was enmeshed with its natural surroundings. Environment herein is meant to include any or all externals of the culture and the people (culture-bearers), though, naturally, culture itself and even physiology are recognized as environment to the individual. For our present purpose the Yokuts and neighboring Western Mono of the Sierra Nevada foothills may be considered culturally one in spite of linguistic and other habitual differences. Emphasis will be on foothill rather than valley Yokuts, the Wukchumni in particular as exemplifying the norm of the cultural features described.[8]

II

The seasonal round of the year had three phases in native terms which fitted with the San Joaquin valley climate: Winter (tomo´kšiu) began about November and lasted through February; Spring (tisa´miu) was roughly March through May; and Summer (haiya´di) was from June through October.[9] These were: a cold rainy season when plant life was in a productive lull and habitation was

6 Clark Wissler, *The Psychological Aspects of the Culture Environment Relation* (American Anthropologist, vol. 14, pp. 217-225, 1911).

7 Franz Boas, *The Mind of Primitive Man* (New York, 1916), p. 103; italics mine.

8 The letter Y after a tribal name denotes Yokuts, WM, Western Mono. All ethnographic material unless otherwise noted is from the author's *Yokuts and Western Mono Ethnography* (Anthropological Records, in press).

9 A fourth season, Fall (wusa'o), was mentioned only upon inquiry, if at all, by my Central Foothill informants, and I believe it to be a modern interpolation. The Northern Foothill people clearly recognized a fall season, as indicated by my own and Dr Driver's informants (Harold E. Driver, *Culture Element Distributions: VI, Southern Sierra Nevada*, Anthropological Records, vol. 1, pp. 53-154, 1937, p. 150).

4: Gayton E-5 (1925-1930)1946
NS29 Yokuts NS29

settled; next a season of warmth with stream, river, and lake floods, and stirring plant growth culminating in the massive blooming of field flowers and foothill shrubs; and then the long hot dry season of harvest seeds bringing a constant drift to temporary camps which ended with the gathering and storing of the staple acorn crop.[10]

The ceremonial round of Yokuts culture was closely fitted to the seasonal cycle of plant and animal activity. There was no winter ceremony unless possibly the oho´wiš, an indoor curing ceremony and shamanistic display involving fish and water animals.[11] This was a time for evening instruction by the telling of myths and by the forcing of boys and girls 10 to 15 years of age to rise in the night and bathe in chilly waters. Austere men concerned about their supernatural power and spiritual vigor would do the same. Indoor occupations flourished, although men hunted daily unless the weather were excessively wet and cold. Houses were patched against winds and soaking rains. Acorns were brought from main storage bins to individual store houses, thence to the dwelling to be shelled as needed. Men and women gathered in houses at dusk to drink the lime and tobacco emetic, then retired home to dream and secure supernatural benefits. By mid-December prospective datura-drinkers began to refrain from meat-eating. Shamans danced to prevent general sickness or to predict the next summer's seed crops.

In late February or early March came the first public ceremony, the drinking of tañai *(Datura meteloides)* by youths and others seeking special knowledge: dream help, second sight, or a view of their future life. This was never held later in the year because the plants were "too strong." The spectacle was attended by people of the local and adjacent communities. For the participants, the critical period was the twelve days prior to the drinking, in which a semi-fast was maintained, and the twelve following days during which meat was still tabu; at the conclusion of which time, as with all Yokuts festivities, a feast was given and meat eaten.

Soon after this (late March, April, and early May) the lavish, colorful blooming of wildflowers engaged Yokuts attention. Crowns of flowers, constructed like the shaman's feather crown, were worn by young and old of both sexes; armloads of flowers were plucked and danced to with special songs.

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10 Twelve "moons" were counted and named by both Yokuts and Western Mono, but no ethnographer has the complete record.

11 Described by both Kroeber and myself, not fully understood by either in description, meaning, or extent; not listed by Driver (A. L. Kroeber, *Handbook of the Indians of California*, Bulletin, Bureau of American Ethnology, no. 78, 1925, p. 507; Driver, *op. cit.*).

4: Gayton E-5 (1925-1930)1946
NS29 Yokuts NS29

the Yokuts (e. g., Salinan, Chumash), while collectively unknown eastern groups were called mountaineers (do´mtui). The north and south dimensions of the valley are greater, and tribal contacts in the floor of the valley were so aligned along the water flow between Kern, Buena Vista, Tulare Lakes, and the lower San Joaquin River.

Of the two other directions, up (ti´pin; sky, above) and down (ati´l), the latter had no special significance beyond myth reference to an underground gambler whose home might be reached via a badger or gopher hole.[20] Upward, "aboveness," was of great religious significance, the embodiment of sacredness and supernatural power. Veneration was manifest in many ways, especially in a religious-motivated looking upwards, looking at the stars and sun with prayerful phrases on the lips, basking in the sun, getting magic "airshot" from the sun during shamanistic contests. Supernatural power was called ti´pni; it was the essence of all "aboveness" and the power derived therefrom, though the term might be applied to anything weird, holy, or peculiarly hyperphysical.

To the earth itself (di´nit) there was no special attitude, nor to the plants growing on it save the narcotics tobacco (so´´og) and *Datura* (ta´ñai). For example, for all the essential uses earth was excavated without special concern—house, sweathouse, or grave pits, for pottery, colored earths for paint. Similarly ordinary stones were taken for implements, motars and pestles, though previously shaped stones such as the "charmstones" of weather shaman, were regarded with awe, as ti´pni.

On the other hand, water (i´dik), especially that of springs, was venerated: "water is immortal because it is everywhere; it is living all the time." Springs were addressed prayerfully, sacred eagle down was scattered near them, and a little water was sprinkled on oneself with a request for long life. Other expressions of this attitude are found in early morning bathing (more than a mere cleansing act), and in myths, wherein submersion or application of water was the standard method of magical resuscitation.

The stars were not ignored; on the contrary, the Morning Star especially was of great importance: people should be up in time to see it, greet it with a prayerful request for "a good world" and longevity. The Pleiades gave luck to gamblers; other stars were dangerous lures to men. Eclipses of moon or sun were hailed with shouts of discouragement, and excessive thunder was admonished to cease. In short, even heavenly bodies were part of the immediate, reachable environment.

Aspects of time, of the place of animals and of man in the world were em-

20 There was no concept of stratified worlds, or of previous and successive worlds.

4: Gayton E-5 (1925-1930)1946
NS29 Yokuts NS29

bodied in Yokuts verbal narratives (mythology). The grand chronology was divided into two major parts—a remote past or prehuman era, and recent times or human era—an ancient "then" and an immediate "now." The prehuman era was that of a world created and occupied by birds and animals of superanimal and superhuman powers. To Eagle, with his bird and animal assistants and companions, was attributed the building of the world, the institution of certain cultural, social, and physical features of man and his way of life. This prehistoric period, described in a fairly full but not elaborately detailed stock of stories, came to an end with the creation of mankind by Eagle and the subsequent transformation of these bird-and-animal people into their present known forms. All this happened beyond the memory of man, but the past continued into the present in the immediate ubiquity of the animals themselves. Beliefs about them were being constantly reinforced by daily happenings in the circumjacent wilds.

The "earth-diver" creation myth was singularly appropriate for the San Joaquin valley people: in aboriginal times the valley bottom was filled with water and as far as the eye could see stretched tule beds thriving along the innumerable sloughs and swampy shores. At least once in the memory of each generation the seasonal flood increased to enormous, alarming proportions. Entirely congruous then, was the belief that once the world was all water and that Eagle, in his omniscience, asked Duck to dive and bring up a speck of sand from which to make a solid earth. Then Falcon and Crow, each flying north on parallel routes, dropped earth to form the pair of mountain ranges, Coast on the west, Sierra Nevada on the east. Coyote stole the sun to provide light, and Jack Rabbit stole fire which Bat had discovered. Falcon and Crow got Tobacco, which gave itself to them; Deer gave himself as food; Cougar hunted him, though Coyote spoiled easy success; Bear made a sweathouse and showed other animals how this should be done; all animals save the carnivores drank *Datura* ceremonially. Eagle wanted immortality, but Coyote argued against it, thereby losing his son, Blue Lizard. Falcon was a hero; his wife Duck, when stolen by Condor was sought by Crow and Bottle-Fly. When Eagle finally created man, Lizard offered his hand as a model. Then Eagle felt the animals should leave and he gave each his choice of habitat and of future service to human beings, as (beside those named above) Skunk and Owl would help shamans, Quail would help women in childbirth, and so on. Then they all "flew off" eastward where today they still exist and know how mankind treats their counterparts on earth. During the animal or prehistoric era the social system was like that of today: Eagle the chief, Dove his messenger, Coyote a clown, Magpie an advisor, and so on.

7:Powers J-5 (1871-1876) 1877 NS29 Yokuts NS29

all withered, but with a lower jaw as of iron, and features denoting extraordinary strength of will—a reckless old gambler, and evidently a teacher of the others—after each throw would grab into the basket, and jerk her hand across it, as if by the motion of the air to turn the dice over before they settled, and ejaculate *wiatak!* It was amusing to see the savage energy with which this fierce old hag carried on the game. The others were modest and spoke in low tones, but she seemed to be unaware of the existence of anybody around her.

Following are the Yokuts numerals, taken at three places:

	KINGSTON.	KAWEAH RIVER.	FORT TEJON.
One.	yet.	yet.	yet.
Two.	po-no′-eh.	pūng′-o-eh.	poan′-oikh.
Three.	so′-pin.	so-o′-pin.	so-o′-pin.
Four.	ha′-to-po-noh.	ha-to-pang-ih′.	ha-to-poan′-oikh.
Five.	yit′-sen-it.	yi-tsing′-ut.	yi-tsin′-et.
Six.	cha′-lip-eh.	chu′-di-peh.	tso′-li-pih.
Seven.	nōm′-chil.	noam′-chin.	noam′-chikhl.
Eight.	mo-noas′.	mu′-nūsh.	mu′-nus.
Nine.	se′-po-noat.	no′-nip.	so′-pon-hut.
Ten.	tsi′-oh.	ti′-i-hoh.	ti′-i-hoh.

On the Tule River Reservation they have coined names for the days of the week. They are these: Wu-lo′-a, Po′-ni-o, So′-pi-o, Hots′-po, Ya′-ti-so, Chol′-po, Hu-lo′-sa.

Their theory of disease is, that it all resides in the blood. To prove this, they cite the fact that the blood always collects underneath a bruise and makes it dark; and also the fact that drawn blood coagulates. Hence their favorite remedy was scarification with small flints. And when they became acquainted with the process of cupping, they wearied the reservation surgeon with applications to have it performed on them for every little ailment. For diseases of the bowels they boil up a mess of a large and very stinking ant, and give it internally.

Their range of food is extensive. Around the lake they cut and dry the seed-stalks of a kind of flag (*Typha*) which has a head something like a